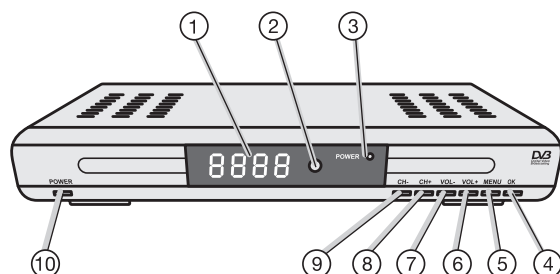
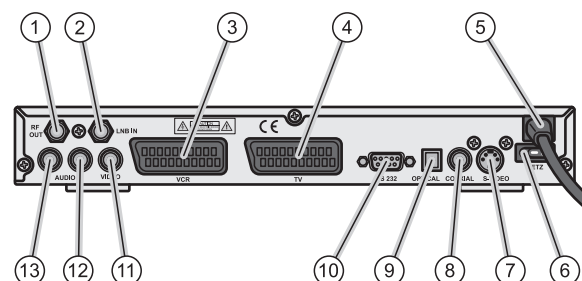


Overview of Equipment

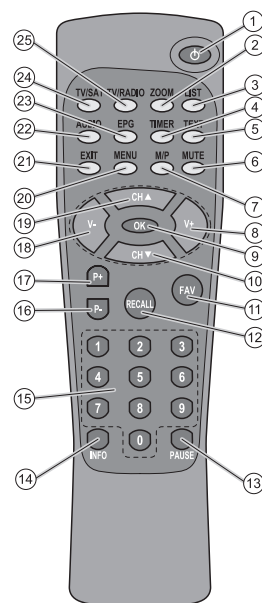
Front side of the receiver



Rear side of the receiver



Remote control



Overview of Equipment

Front side of the receiver

1	LED display	Shows channel location or time
2	–	Infrared sensor for the signal of the remote control
3	LED POWER	LED is illuminated if the receiver is switched on or in standby mode
4	OK	Confirm
5	MENU	Invokes main menu
6	VOL+	Increases volume Cursor moves to the right
7	VOL–	Decreases volume Cursor moves to the left
8	CH+	Switches to the next higher channel location Cursor moves up
9	CH–	Switches to the next lower channel location Cursor moves down
10	POWER	Switches on and switches to the standby mode

Rear side of the receiver

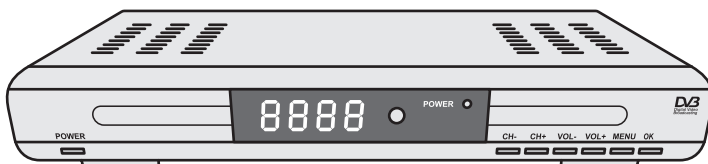
1	RF OUT	LNB connection for a second satellite receiver
2	LNB IN	LNB connection for the antenna cable
3	VCR	SCART connection for the video set
4	TV	SCART connection for the TV set
5	100–240 V~ 50/60 Hz, 30 W	Mains connection
6	0/1	Mains switch
7	S-VHS	S-Video connection
8	COAXIAL	Digital coaxial audio output
9	OPTICAL	Digital optical audio output
10	RS 232	Serial port
11	VIDEO	Analog video connection
12	AUDIO L	Left analog audio connection
13	AUDIO R	Right analog audio connection

Remote control

1	POWER	Switches on and switches to the standby mode
2	ZOOM	Enhances the TV image
3	LIST	Shows favourites list (groups)
4	TIMER	Timer
5	TEXT	Teletext
6	MUTE	Turns off sound
7	M/P	Without function
8	V+	Increases volume/cursor moves to the right
9	OK	Confirms menu or menu item
10	CH ▼	Switches to the next lower channel location / cursor moves down
11	FAV	Invokes favourites list
12	RECALL	Switches to previously selected channel
13	PAUSE	Stills the frame
14	INFO	Displays reception data of the current channel
15	0-9	Selects channel directly, numerical input
16	P-	Scrolls pages down in menus
17	P+	Scrolls pages up in menus
18	V-	Decreases volume/cursor moves to the left
19	CH ▲	Switches to the next higher channel location / cursor moves up
20	MENU	Invokes main menu
21	EXIT	Exits menu or menu item
22	AUDIO	Changes audio mode
23	EPG	Electronic Program Guide (if offered)
24	TV/SAT	Switches between terrestrial and satellite antenna
25	TV/RADIO	Switches between TV and radio mode

Digital Satellite Receiver SL 65

Operating Manual



Version 1, as of 03.05.2005

Preface

This operating manual will help you in the

- appropriate,
- safe and
- favorable

usage of the digital satellite receiver, in short, the "receiver".

We assume that the user of the receiver has overall knowledge regarding the handling of audio and video equipment.

Each person who

- installs,
- connects,
- operates,
- cleans or
- disposes of

this receiver must be familiar with the entire content of this operating manual. Always keep this operating manual in the proximity of the receiver.

Style Features

Specific style features have been given in different sections of the operating manual. Thus, you can easily differentiate whether it concerns

normal text,

- enumerations or
- ⇒ actions.

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Safety Instructions

Please read the safety instructions carefully before operating the receiver.

Please follow all warnings and instructions on the equipment and in the operating manual.



Basic Safety Instructions

Electrical connection

- Do not expose the receiver to rain as well as any kind of humidity to avoid risk of fire and electric shock.
- Never open the casing. Otherwise, there is a risk of electric shock.
- Connect the receiver only to a professionally installed mains socket of 100–240 V, 50–60 Hz.
- The total power consumption by the antenna connection of the receiver “LNB IN” must not exceed 350 mA.
- Pull out the mains plug from the socket if the equipment is not in use for a longer period of time. Always pull out only the mains plug.
- If foreign bodies or fluids enter the receiver, immediately pull out the mains plug from the socket. Ask a qualified person to check the equipment before operating it once again. Otherwise, there is a risk of electric shock.
- Ensure that the power source (socket) is easily accessible.
- Do not bend or crimp the mains cable.
- If the mains cable is damaged, the receiver must be repaired by an expert before reusing it. Otherwise, there is a risk of electric shock.
- Never allow children to operate the receiver or to play with the antenna unit unless supervised.
- Always ask qualified personnel to carry out maintenance jobs. Otherwise, you are putting yourself as well as others at risk.

-
- Disconnect the receiver from the power source in case of operational disruptions.

Suitable location

- Place the receiver on a stable and even base.
 - Avoid proximity to:
 - heat sources, like e. g. heaters,
 - naked flames, like e. g. candles,
 - devices with strong magnetic fields, like e. g. loudspeakers.
- Never place receptacles filled with liquid (e. g. vases) on the receiver
- Avoid direct sunlight and places with an extremely high amount of dust.
 - Never cover ventilation slits. Ensure adequate ventilation by maintaining a safety distance of 5 cm to other objects.
 - Do not place any heavy objects on the receiver.
 - Humidity may settle in the receiver if is brought into hot surroundings from a cold one. In this case, wait for about an hour before operating the equipment.
 - Arrange the mains and antenna cable in such a manner that no one steps or trips over them.

Correct battery handling

- Batteries may contain toxic agents. Ensure that batteries are not within the reach of children. Children may eat and swallow batteries.
- Batteries that are getting discharged may damage the remote control. If you will not use the receiver for a longer period of time, remove the batteries from the remote control.
- Batteries may contain toxic agents that are hazardous to the environment. Therefore, dispose of the batteries immediately according to the prevailing statutory regulations. Never throw the batteries in normal household waste.

Explanation of Safety Instructions

The following categories of safety instructions are included in the operating manual:



Danger!

Instructions with the word DANGER give a warning against possible personal injuries.



Caution!

Instructions with the word CAUTION give a warning against possible material or environmental damages.



These instructions contain special information for commercial usage of the receiver.

Appropriate Usage

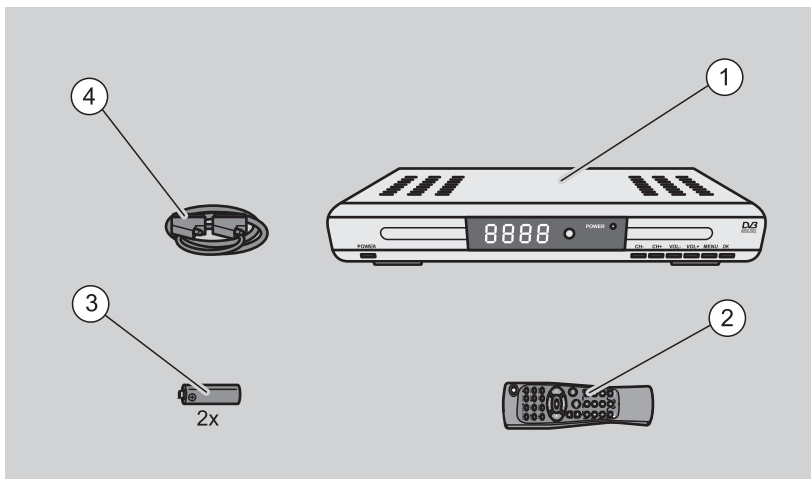
The digital satellite receiver SL 65 receives digital channels in a covered area. It is exclusively meant for this purpose and should only be used for the same. This also includes paying attention to all information in this operating manual especially that of safety instructions.

Any other usage is considered to be improper and may lead to material damages and even personal injuries.

The manufacturer does not bear any liability for damages caused due to improper usage.

Scope of Supply

Check the scope of supply after purchase. The scope of supply may vary according to the type of the receiver. Please follow the information on the packaging.



No.	Pieces	Description
1	1	Digital Satellite Receiver SL -65
2	1	Remote control
3	1	2 batteries type LR 03/AAA/1,5 V
4	1	SCART cable

Description

With this receiver, you are able to receive digital satellite channels via a satellite antenna.

You need not program the receiver. The most common broadcasting stations of the mostly used satellites are pre-programmed.

You can receive the channels broadcasted through these satellites as soon as you have connected the receiver to a satellite antenna and oriented it to one of these satellites.

The receiver will scan for further new broadcasting stations as soon as you initiate the automatic scanning of broadcasting stations for this satellite.

All receiver settings can be done easily using the user interface (menu) on the TV-monitor. The user interface supports the following languages:

- German,
- Spanish,
- English,
- French,
- Dutch,
- Greek,
- Polish.
- Czech,
- Turkish.
- Italian and
- Hungarian.

They are pre-programmed by the company:

- Astra 1
- Hotbird
- Turksat
- Sirius2
- Amos

The receiver gets a firmware update program through the Astra 19° satellite.

Other features of the equipment:

- OSD languages: German, English, French, Turkish, Polish, Greek, Hungarian, Spanish, Czech, Italian, and Dutch
- Software update via satellite Astra 19° or RS232 connection
- Short switching time, fast boot process when switching on the receiver
- Saves the last channel watched, skip key to the channel previously watched
- Fully compatible with MPEG-2 and DVB
- MPEG Video (MP@ML), MPEG-1 Audio Layer1, Layer 2
- LNB control logic (sound 0/22 kHz), max. current delivery for LNB 350 mA
- Symbol rate 1-35 MS/s and 950–2150 MHz input frequency
- Manual PID entry possible
- 7 keys at the frontage
- plug and play
- Power draw in standby mode less than 3 W
- 100–240 V, 50/60 Hz mains connection
- Installation assistant
- 4000 channel storage locations
- Child lock
- 1 favorites list and 9 channel groups, editor
- Automatic scanning of broadcasting stations
- List editor for broadcasting stations
- Analogue sound output through Cinch-connector, volume adjustment possible via remote control
- RCA video output Cinch, S-VHS output
- SPDIF: Coaxial OPTICAL audio connection
- 2 SCART connections for TV and video set
- TV SCART with CVBS, RGB and YUV signal


-
- Loop-through function for the connection of an analogue receiver, (F connection, loop through)
 - Super Fast Videotext with a memory of 800 pages
 - Radio reception, background image for radio
 - Channel information on the screen, current time
 - DiSEqC 1.0, 1.2, Goto X is supported if an appropriate antenna unit is connected
 - SWAP function
 - Screen aspect ratios can be set to 4:3, 16:9, and automatically
 - Multi-functional timer, 8 x and linked with EPG, sleep timer
 - Electronic program guide (EPG)
 - SCPC/MCPC reception standard C/Ku-Band satellites
 - Automatic selection of NTSC/PAL and video converter
 - Signalmeter for the orientation of the paraboloidal-type reflector



Additionally, a suitable channel editor can be downloaded from our website (www.comag-ag.de). Then you will be able to edit the channel lists of the receiver using your computer. Please read the information on our website for this purpose.

Connecting the Receiver

The receiver is connected by means of an LNB cable with the connector box of your satellite antenna. You must install the LNB cable before connecting the receiver, if necessary.

 The LNB cable is not included in the scope of supply.



Caution!


Connect the receiver to the mains only after you have connected it to all equipment and the antenna properly. Otherwise the receiver can suffer damages.

The wire netting and the inner core of the LNB cable carry current during operations.

LNB cable installation

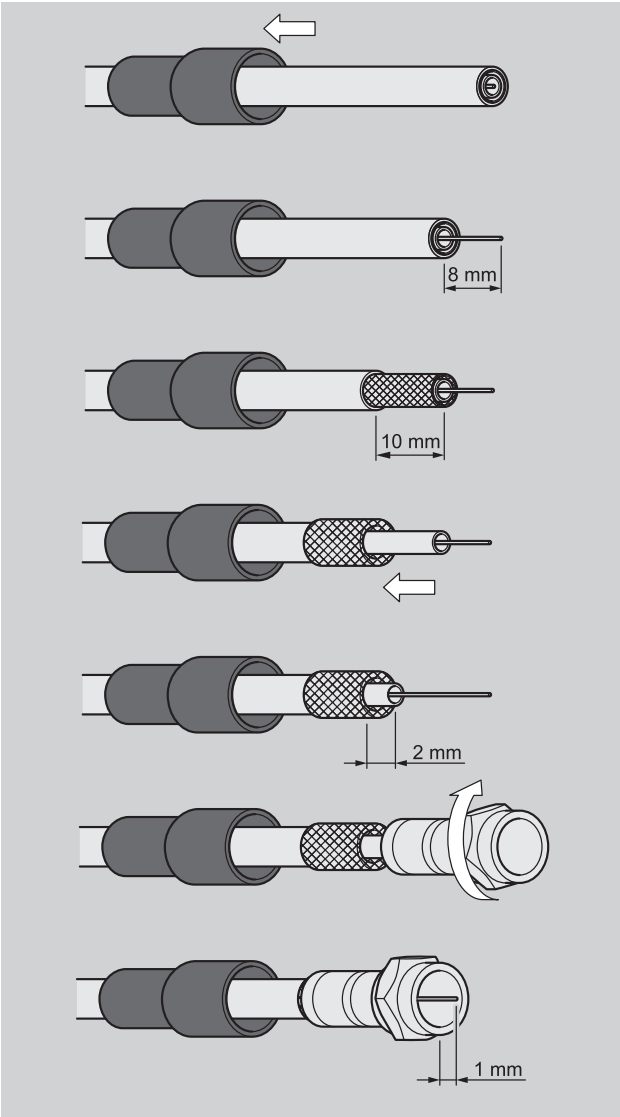
A pair of wire strippers and a cable cutter is required for installing the IF-connector on the coaxial cable.

- ⇒ Cut 8 mm of the coaxial cable at each end up to the inner core.
- ⇒ Carefully cut 10 mm of the outer insulation so that the wire netting is exposed.
- ⇒ Turn the wire netting backwards and wind it over the outer insulation in such a manner that it does not touch the inner core.
- ⇒ Remove the inner insulation up to 2 mm from the wire netting.
- ⇒ Rotate the IF-connector onto the turned-back wire netting till the connector touches the inner insulation.

 The wire netting should not protrude from the back of the connector end.

- ⇒ Cut the inner core with a cable cutter in such a manner that it projects maximum 1 mm from the connector.

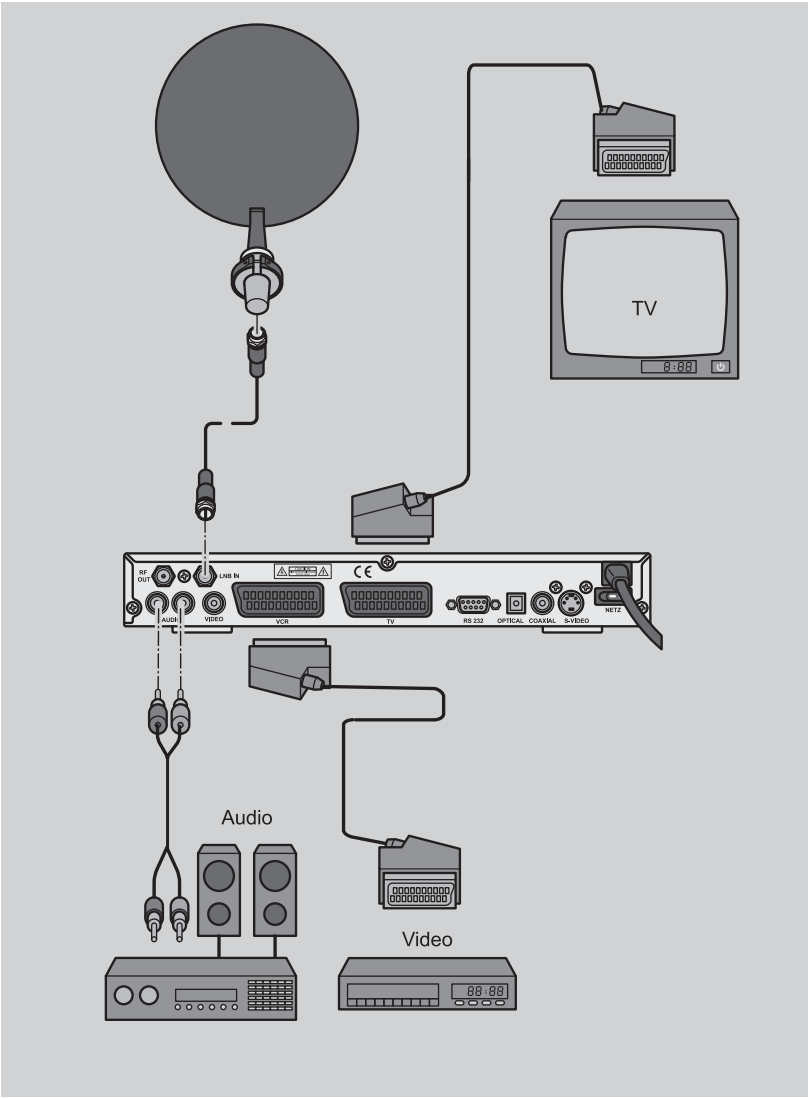
Installation diagram



Connection with the SCART cable

- ⇒ Fasten the IF-connector of the LNB cable onto the “LNB IN” antenna connection on the receiver.
- ⇒ Insert the SCART cable in the SCART socket “TV” on the receiver.
- ⇒ Connect the SCART cable to the TV set. Follow the operating manual of the TV set.
- ⇒ Insert the SCART cable in the SCART socket “VCR” on the receiver if you want to connect a video set.
- ⇒ Connect the SCART cable to the video set. Follow the operating manual of the video set.
- ⇒ Insert the Cinch-connector of the Cinch cable in the “AUDIO-R” and “AUDIO-L” sockets of the receiver if you want to connect a stereo system.


Connection diagram




Connection with the YUV cable


If you own a TV set with YUV connections, you can connect it via the SCART socket "TV" to the receiver. For this purpose, you need a YUV cable with YUV connectors at one and a SCART connector at the other extreme.

- ⇒ Connect the YUV cable (not included in the scope of supply) to the YUV connectors of the TV set.
- ⇒ Connect the SCART connector of the YUV cable to the SCART socket "TV" on the receiver.

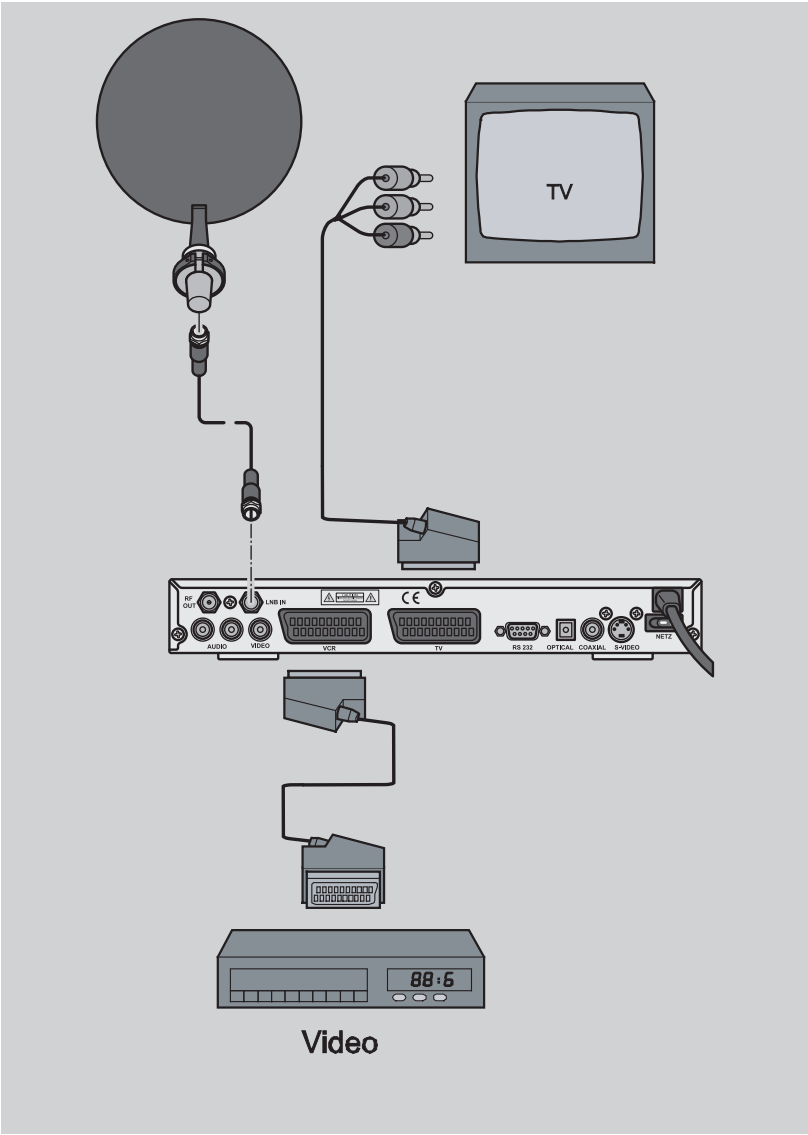
 Follow the indications in the operating manual of the TV set.

- ⇒ connect the SCART cable to the SCART socket "VCR" on the receiver if you want to connect a video set.

 Follow the indications in the operating manual of the video recorder.

 This YUV output is a special high quality output and particularly suitable for flat screens, plasma TV sets or video projectors (beamers). Please follow the indications in the operating manual of the connected devices.

Connection diagram



Connection with the S-Video Cable (S-VHS)



Caution!

Strictly follow instructions for connecting the S-video cable (SVHS) given in the operating manual of your TV set.



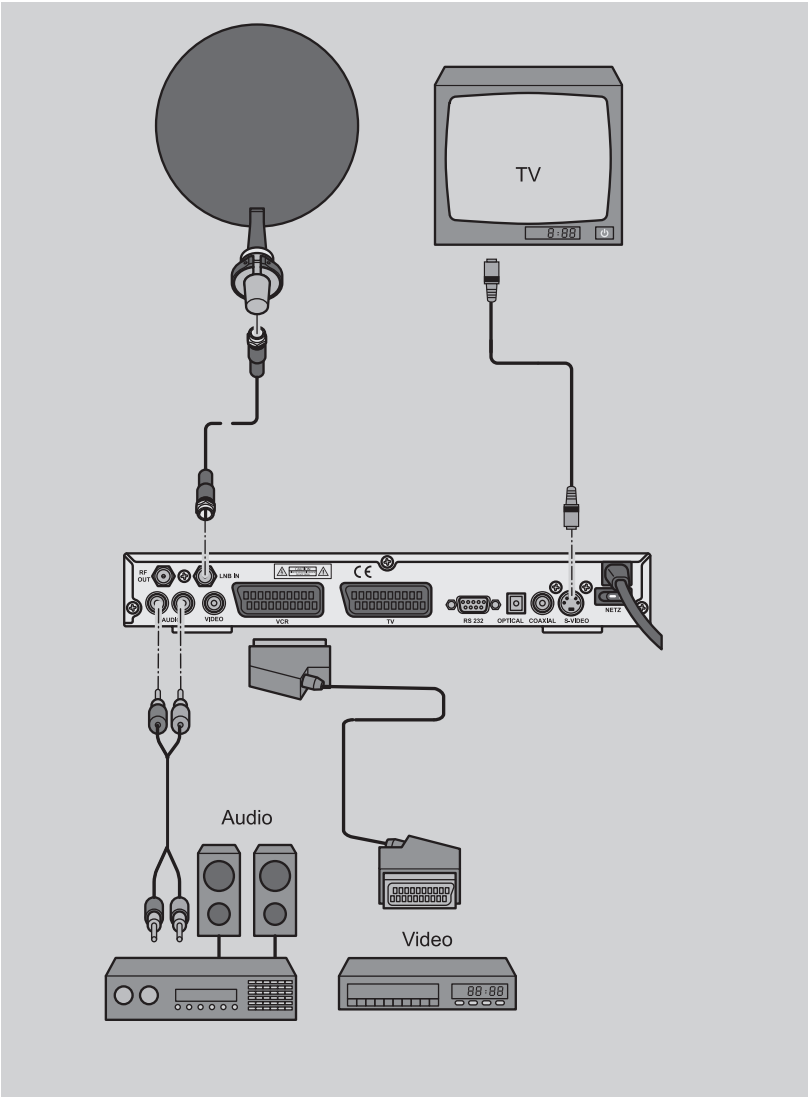
The S-Video cable is not included in the scope of supply.

- ⇒ Insert the S-Video cable in the “S-Video” socket on the receiver.
- ⇒ Connect the S-Video cable to the TV set.
- ⇒ Insert the Cinch connector of the Cinch cable in the “AUDIO-R” and “AUDIO-L” sockets of the receiver.
- ⇒ Connect the Cinch cable to the TV set.
- ⇒ Insert the SCART cable in the SCART socket “VCR” on the receiver if you want to connect a video set.
- ⇒ Connect the SCART cable to the video set.



Follow the operating manual of the video set.

Connection diagram

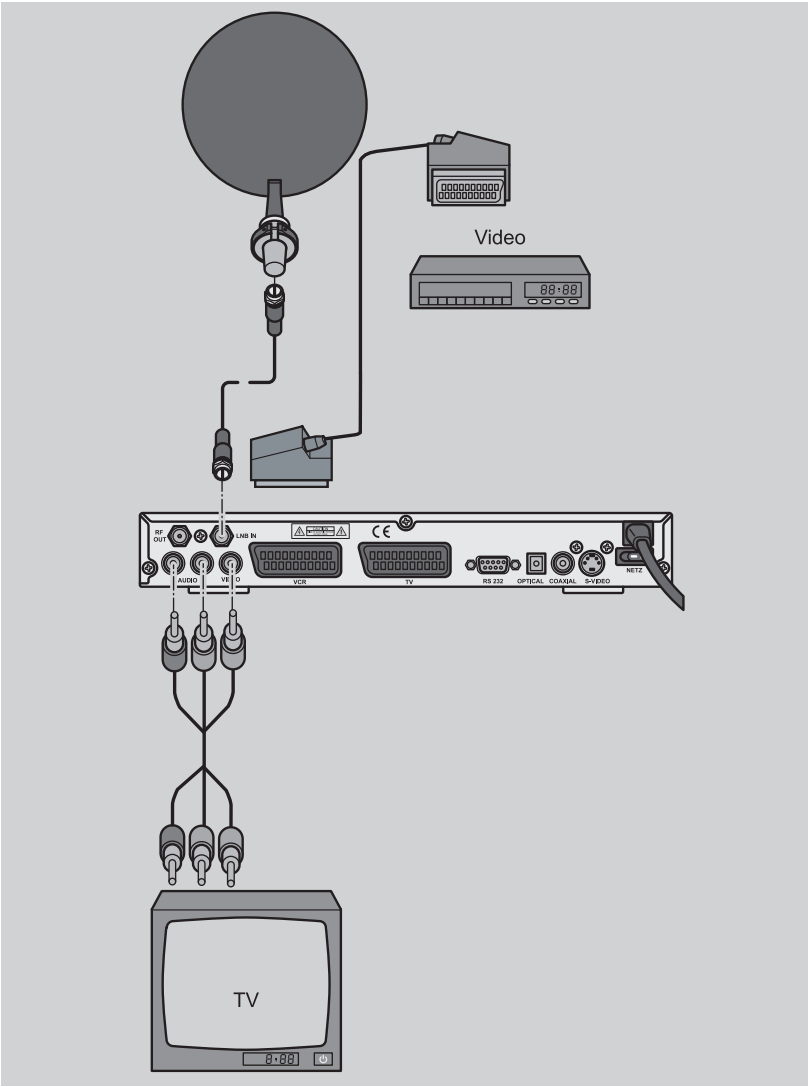


Connection with the Cinch cable

If you own a TV set not provided with a SCART socket, you can connect the receiver via a Cinch cable.

- ⇒ Connect the “VIDEO” socket on the receiver to the video input of the TV set.
- ⇒ Connect the “AUDIO-R” and “AUDIO-L” sockets of the receiver to the audio inputs of the TV set.

Connection diagram



Connection of an Audio-Digital Receiver

If you want to use 5-channel audio transmission (Dolby digital sound/AC3), you must connect your audio-digital receiver to the optical or coaxial output of the receiver.



Caution!

Never connect the Phono input of your stereo system to the receiver; it may damage your stereo system.
Strictly follow instructions for connecting the Cinch cable given in the operating manual of your stereo system.



Caution!

Please follow strictly the information regarding the connection in the operating manual of your audio-digital receiver.



The optical and coaxial cables are not included in the scope of supply.

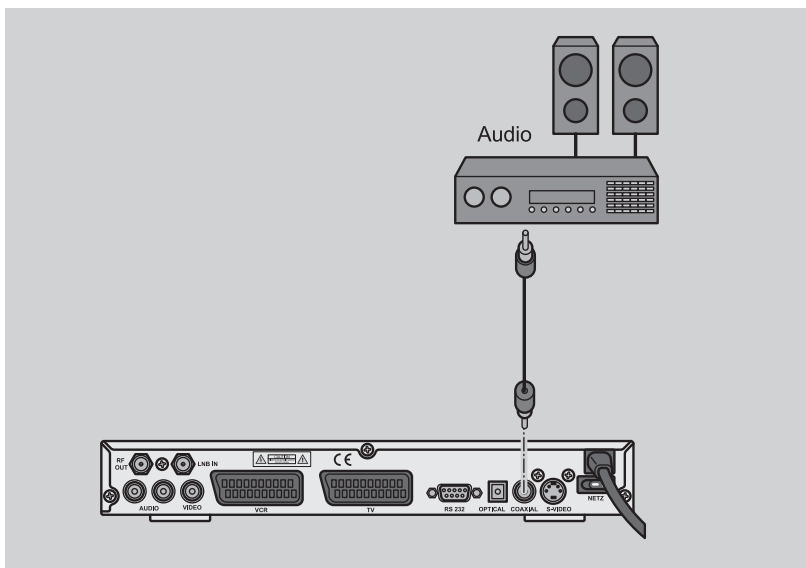


Your TV set need not be switched on for radio reception. You must switch on the TV set if you want to receive TV sound through your stereo system.

Connection of the coaxial digital output

- ⇒ Insert the coaxial cable in the “COAXIAL” socket on the receiver.
- ⇒ Connect the coaxial cable to the audio-digital receiver.

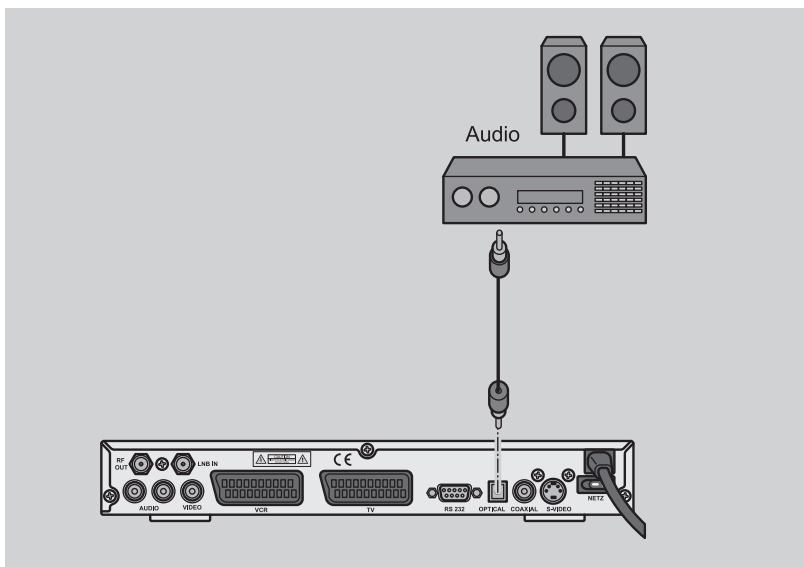
Connection diagram



Connection of the optical digital output

- ⇒ Pull the protective cap out of the "OPTICAL" socket on the receiver.
- ⇒ Insert the optical cable in the "OPTICAL" socket on the receiver.
- ⇒ Connect the optical cable to the audio-digital receiver.

Connection diagram

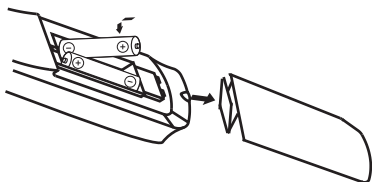


Operation

Remote control

Two Micro type batteries are required for the remote control:
LR 03/AAA/1.5 V

⇒ Open the battery compartment.



- ⇒ Insert two batteries according to polarities mentioned on the battery compartment. Push the cover of the battery compartment carefully till the cover is locked.
- ⇒ Replace discharging batteries on time.
- ⇒ Always replace both batteries simultaneously and use batteries of the same type.
- ⇒ If one battery has leaked, wear protective gloves and clean the battery compartment with a dry cloth.



Caution!

Batteries may contain toxic agents that are hazardous to health and environment. Therefore, dispose of the batteries immediately according to the prevailing statutory regulations. Never throw the batteries in normal household waste.

The remote control transmits infrared signals to the receiver. Please refer the overview of the remote control for functioning of the keys.

- ⇒ Point the remote control towards the front side of the receiver and slightly press the corresponding key once.

Receiver



Caution!

Check that connections of all equipment and the antenna are proper before connecting the receiver to the mains.

⇒ Insert the mains plug of the receiver in the mains socket.

The device is in standby mode. The numerical display of the receiver is not illuminated (display dark).

⇒ Insert the mains plugs of the connected equipment in the mains socket and switch them on.

⇒ Switch on the AV channel of the TV set.

⇒ Switch on the receiver via the red key on the top right on the remote control.

The channel-location display of the receiver shines green.

The receiver is supplied with preprogrammed TV channels and can be used directly. If you want to check if new channels are available, initiate a scan for broadcasting stations. For this purpose, read the information on page 26.

Operation

User interface on the TV monitor

You can do individual settings of your receiver using the menus in the user interface. You must switch on the receiver and the TV set to view the user interface. It consists of main menus and their sub-menus.

⇒ Press the "MENU" key.

The main menu will be displayed. By pressing the "EXIT" key, you can exit the menu again.

Orientation within the menus

Top left: menu name

Right: Sub-menu or menu items

Bottom left: Miniature view of the set channels

Bottom right: The information bar indicates the keys with which you can move yourself within the current menu.

Screen-Inlays while Switching a Channel

When a channel is switched, an information bar is inlayed on the screen for 5 seconds.

In this information bar, you will find the following indications:

	Date
	Current time
	Audio language
	Channel location
	Received channel
	The satellite through which signals are received
TXT symbol	“TXT” is displayed when the selected broadcasting station offers Delete.
EPG	“EPG” is displayed when the selected broadcasting station offers the program information.
Heart symbol	The heart symbol is displayed when you have included the program in your favorites list.

Menu Structure

Main menu	Sub-menu	Description
Channel Manager	Channel assignation	See following text
	Channel groups	See following text
	Sort channels	See following text
	New channel	Setup of new channels
	Edit channels	Editing of PID channels
	Delete All	See following text
System installation	Add satellite	Adding satellites manually
	Edit satellite	Modifying settings of the existing satellites
	Delete satellite	Delete settings made for the satellite
	Automatic scan	Adjusting settings for the satellite automatically
	Manual scan	Direct entry of the frequency
	Change transponder	See following text
	Delete transponder	See following text
	Satellite scan	See following text
System configuration	System setup	See following text
	DISEqC motor setup	See following text
	Boot channel	Setting boot channel
	Company Setting	See following text

Main menu	Sub-menu	Description
Other	Games	See following text
	Signal display	Information on satellite and signal strength
	Serial update	Activate RS232
	Satellite update	Software update via satellite Astra 19,2° East
	Keyboard layout	Help texts on the functions of some keys on the remote control
	Version	Information on hardware and software of the receiver

Menu Navigation

⇒ For switching between the sub-menus press the arrow keys "CH ▼" and "CH ▲".

The selected sub-menu is marked in yellow.

⇒ Press the "OK" key to confirm the marked sub-menu.

Menu items of the selected sub-menu are displayed.

⇒ Press the "CH ▼" and "CH ▲" arrow keys to switch from one sub-menu to the next one.

The selected menu item is marked in yellow.

⇒ Press the "OK" key to confirm the marked sub-menu.

Settings for this menu item are displayed. Most menu items are displayed on the screen in a divided format. On the left, the setting is displayed. On the right you can see the currently set data.

⇒ Press the "CH ▼" and "CH ▲" arrow keys to switch from one setting to the next one.

The selected setting is marked in yellow.

⇒ Press the "OK" key to confirm the marked setting.

⇒ You can:

- switch between the options by using the arrow keys "V+" or "V-"
- mark the desired option with the arrow keys "CH ▼" and "CH ▲"
- enter numbers by means of the numeric keys if the setting requires a numeric entry.

⇒ Press the "OK" key to confirm the setting.

⇒ Press the "EXIT" key to return to the next higher menu level.

⇒ Press the "EXIT" key to exit the main menu.

The screen menu is closed and the screen is in the TV mode.

Edit channel list

⇒ For editing the channel list, go to the sub-menu “Channel assignation” (via Menu, Channel admin.)

The beginning of the list of available channels is displayed. Further information on a marked channel is displayed which can be modified.

Option	Description
1.Fav	The selected channel will be included in the favorites list
2.Lock	You can block or unblock channels in the list.
3.Skip	You determine whether a blocked channel will be skipped or not during channel selection.
4.Del(ete)	You can delete a channel from the channel list.
5.Move	You can move a channel within the channel list.
6.Rename	You can rename the channel as per your wish.

⇒ Press the corresponding numeric key on the remote control to select the desired option. “EXIT” key, exit without change.

Favorites list, channel groups

⇒ To create or edit the favorites list, go to the sub-menu "Channel groups".

The list of available TV channels is displayed. By means of the numeric keys you can assign each channel to a group (favorites list):

- 0 -
- 1 News
- 2 Technology
- 3 Sports
- 4 Movies
- 5 Children
- 6 Music
- 7 Fashion
- 8 Family
- 9 Drama

Each group has been assigned a special symbol. When you invoke a channel later, this symbol will be displayed.

⇒ Assign the channels to a group of your choice. Press the "OK" key to save the settings.

Invoking the favorites list

⇒ Slightly press the dark blue "List" key twice.

On the left, the favorites list is displayed, on the top right you can see a preview and on the bottom right the corresponding category.

⇒ Select the desired favorites list on the bottom right.

Sort channels

⇒ Go to the sub-menu "Sort channels" to sort the channels.

You can sort channels automatically according to different criteria, e.g. alphabetic.

⇒ Select a criterion and confirm the input with the "OK" key.

Channels are sorted as per this criterion accordingly.

For carrying out a manual sorting of the channels, select:

"Menu" key, Channel admin., Channel assignation, "OK" key, numeric key 5 (= Move), the channel to be sorted will be marked white, then go up (or down) by pressing the "CH" keys to sort the channel as per your wish, "OK" key, "Exit" key.

Invoke the installation assistant

The installation assistant will be invoked automatically, if you delete all default settings of the receiver.



If you delete all channels and settings, all default settings for the receiver will be lost!

⇒ To invoke the installation assistant, go to the sub-menu "Delete all".

⇒ Press the "OK" key to confirm the warning message.

Subsequently, the installation assistant is started automatically and leads you through the required settings for the receiver. During the installation process, settings with regard to the language, the pre-programmed channels and the new channels to be installed are queried.

Edit or delete the transponder list

We do not recommend carrying out any changes in the transponder list.

⇒ Select the menu item, "Edit transponders" in the "System installation" menu to edit the transponder list.

⇒ Select the menu item, "Delete transponders" in the "System installation" menu to delete the transponder list.

Start scan of broadcasting stations

- ⇒ Select the menu item, "Edit satellite" in the "System installation" menu.
- ⇒ Press the "OK" key.
- ⇒ Select the desired satellite.
- ⇒ Select the search criterion in "Channel type". We recommend using the option "uncoded".
- ⇒ Press the "OK" key.
- ⇒ Respond to the query "Start scan" with "yes".
- ⇒ Now, you will see the satellite frequency assignation. Press the "OK" key once again.
- ⇒ The scan starts automatically. The newly found broadcasting stations will be added automatically at the end of the existing channel list.

Hints for satellite experts:

Additionally, you may run a special scan, for which start and end frequencies can be entered. (transponder frequencies are unknown)

Procedure: "Menu" key, System installation, automatic scan, enter satellite as well as start and end frequencies, possibility of entering up to three different symbol rates, "OK" key. This scan requires more time than the one described above. Transponder frequencies are found, then press "OK" key for scanning the individual TV channels. Save channels manually after the scan has finished.

Add a new, not pre-programmed satellite and run a scan on it

Adding a new satellite

- ⇒ Press the "MENU" key.
- ⇒ Select the sub-menu "Add satellite" in the menu "System installation".
- ⇒ Press the "OK" key.

A small menu will be displayed on the screen.

- ⇒ Press the "V+" key.

A small menu with satellite names will be displayed on the screen.

- ⇒ Select "User satellite" with the "CH ▼" and "CH ▲" arrow keys.
- ⇒ Press the "OK" key.
- ⇒ Press the numeric key 1 to enter a name for the "User satellite".

An editor will be displayed on the screen. It reads "User satellite".

- ⇒ Select the letters and numbers for the new satellite name using the "CH ▼" and "CH ▲" arrow keys and the numeric keys.
- ⇒ If you wish to delete an entered letter, press the "AUDIO" key.
- ⇒ Press the "OK" key to confirm the entry.

The editor is closed.

- ⇒ Press the "OK" key once again.

The message "Update successful" appears on the screen.

Scan on the new satellite

- ⇒ Select the sub-menu “Automatic scan” in the menu “System installation”.
- ⇒ Press the ”OK” key.
- ⇒ Press the ”V+” key.
- ⇒ The new satellite will be displayed in a small menu on the screen.
- ⇒ Select the new satellite.

Now, you will see the satellite frequency assignation.

- ⇒ Press the ”OK” key.
- ⇒ If you wish to modify the start and end frequency of the satellite, proceed as described in ”Hints for satellite experts”.

Change system setup

In the sub-menu “System setup” (via “Menu” key, System configuration) you can select following settings:

Sub-menu	Option/Description
Language	Set menu language: German, Dutch, Polish, Czech, Spanish, Hungarian, English, Italian, Turkish, French, or Greek
OSD screen dialog	Define color of the on-screen display
	Shows time on the OSD
	Shows subtitles on the OSD
	Period, after which the OSD will disappear
	Define position of the information table on the screen
	Set transparency of the OSD
	Define frame for the OSD (background image for radio)

TV set	Video mode: Auto, PAL-M, PAL-BG, NTSC, Secam
	4:3 Letterbox, normal format 4:3 PanScan, full image height with aspect ratio 4:3, wide screen with 16:09
	Set video output: CVBS, RGB, YcbCr (YUV)
	HF mode: without function
	HF channel: without function
	Set brightness of the TV image
	Set contrast of the TV image
Time	Time settings
	On/off, set daylight saving time
	Time settings in timer mode (auto, manual). Selecting manual, a direct entry of time and date is possible
	Set date
	Set time
	Difference to GMT: Set difference to the time in Greenwich
	Timer: On/off, activate or deactivate the timer
Child lock	Default value is 0000 Change of password, see detailed description below.
Audio	Assignment of audio signal to individual keys

Please note: The lower information bar in the screen menus shows you which keys you can use.

⇒ Make the desired settings.

PIN code / child lock

In this menu, you can block the key functions of the device.

You can modify the PIN code (password) set by the company and enter any other four-digit number as a personal PIN code. The PIN code "0000" has been pre-programmed by the company.



Please memorize the new PIN code since only this new code will be applicable after carrying out the modification. If you have forgotten your personal PIN code, please contact the manufacturer.


- ⇒ Go to the sub-menu "Installation".
- ⇒ Select the menu item, "Child lock" and then "New password".
- ⇒ Enter the old PIN code using numerical keys.
- ⇒ Then, enter the new PIN code in the next line.
- ⇒ The display jumps automatically to the menu item "Confirm password".
- ⇒ Enter the new PIN code once again.

The new password is accepted.

DiSEqC motor setting

(via “Menu“ key, System configuration)

- ⇒ Select the menu item, “DiSEqC motor setting” in the menu “System configuration” for doing DiSEqC motor settings.


 You can carry out changes only if you have connected the receiver to a motorized satellite system.

Boot channel

(via “Menu“ key, System configuration)

- ⇒ Here, you can define the channel displayed when booting the device after a power failure.

Company Setting

 All your settings and stored data are deleted. The receiver is reset to original settings.

- ⇒ Select the menu item, “Company setting” in the “system configuration” sub-menu to reset the receiver to company settings.
- ⇒ Select an option and respond to the warning message.
- ⇒ Wait until the receiver has rebooted.

This process may take some minutes.

Acoustic signal for the orientation of the satellite antenna

(Via “Menu“ key, Other, Signal display). Simultaneously, optical signal strength is displayed.


An acoustic signal is transmitted via the TV set. A stronger and higher signal indicates a better orientation of the antenna.

Software upgrade via satellite

Please note: the update has **nothing** to do with the storage of TV channels. It is rather meant to update the system software of the receiver.


Normally, the update is **not** required for a trouble-free operation of the receiver.

⇒ Select the menu item, “Upgrade via satellite” in the “Other” sub-menu for updating the software.

 You must direct your satellite system towards the ASTRA 19° satellite to be able to update the software.

⇒ Confirm the warning message by pressing the “OK” key if you want to carry out an update.

The receiver starts updating the software. Confirm the query: “Do you wish to continue?” with “Yes”.

 Updating the software may take up to an hour.

You are prompted to press any key after completing the update.

⇒ Press any key.

Subsequently, the menu displays a confirmation message as update has been completed successfully.

Games

The games Tetris and Minesweeper are available on the receiver. It is indicated which keys of the remote control are required.

⇒ Select one of the two available games in the sub-menu “Games”.

Keys with special functions

EPG mode

In this mode, you can obtain information on the current program.

⇒ Press the "EPG" key during normal operation.

On the left appears the list of broadcasting stations and on the right current information on the selected program.

By pressing the "EPG" key once again, you will obtain further short messages concerning following programs (up to 7 days in advance).

Using the "CH" keys, you can browse the display within the same day. With the "V-" and "V+" keys, you can select the desired days. By pressing the "OK" key after selecting an entry, you can get additional information on a program.

Timer

(Via the "Timer" key). In this menu you can set up to eight different timers. The receiver will then switch on the TV set at the determined time. You have following setting options:

Option	Description
Timer number	Set timer number from 1 to 8
Timer mode	Set interval: off, once, daily, weekly, monthly, annually
Wakeup mode	Set message or channel
TV channel	Select channel or an event for the above cited setting "message": birthday, anniversary, general
Starting date	
Starting time	
Operating time	Operating time of the receiver

- ⇒ Select the desired settings by using the key arrows "CH ▼" and "CH ▲" or "V-" and "V+".
- ⇒ Press the "OK" key.

Audio

With the Audio key, you can select the audio track if a broadcasting station offers multi-channel sound. Additionally, you can activate the Dolby Digital mode here (For this purpose you additionally need a Dolby Digital system. The connection is made on the rear of the device via the COAXIAL or OPTICAL socket).

Zoom

With the zoom function, you can enhance a section of the image.

- ⇒ Press the "Zoom" key once.
- ⇒ Select the section by using the key arrows "CH ▼" and "CH ▲" or "V-" and "V+".
- ⇒ Press the "OK" key.

With each pressing of the "OK" key, a section of the image will be enhanced up to a maximum of 6 x. With the seventh key pressure the image will return to its original size.

List

This function key shows you on the left the channel list and on the right the assigned satellites as well as a preview of the program.

- ⇒ Press the "List" key once.
- ⇒ Press the "List" key once again.

Now you can see the favorites list (groups) on the right.

- ⇒ Select the desired group.

Switching between TV and SAT

With the "TV/SAT" key, you can switch between TV and satellite functions.

- ⇒ Press the "TV/SAT" key as long as you have set the desired function.

TV/Radio

With the “TV/Radio” key (key on the remote control: TV/?) you can switch between TV and radio functions.

- ⇒ Press the “TV/Radio” key as long as you have set the desired function.

Now, the receiver transmits a radio program and shows a background image.

- ⇒ To return to the TV program, press the “TV/Radio” key on the remote control.

Teletext

Teletext is an information system displaying Teletext on your TV set. For Teletext reception the selected channel must support this function.

- ⇒ To switch on Teletext, press the “Text” key. Then, select the language and confirm by pressing the “OK” key.
- ⇒ For switching off Teletext, press the “Text” key again.

Using Fasttext functions

The colored keys on the remote control are meant for Fasttext. On a selected Teletext page, different subjects can be displayed in four different colors or in colored frames (red, green, yellow and blue).

You can get there directly by pressing the small colored keys on the remote control. The colors of the subjects correspond to the colors of the keys.

- ⇒ Press the desired key.

Fav

⇒ Press the "Fav" key.

The screen shows the previously defined favorites list.

⇒ Select a channel from the favorites list.

⇒ Press the "OK" key to confirm the selection.

Uninstalling the receiver

⇒ Disconnect the receiver and connected equipment from the power supply.

⇒ Loosen the LNB cable from the receiver.

⇒ Take the batteries out of the remote control, if you will not use the receiver for a longer period of time.

⇒ Pack up the receiver, the cables and the remote control in a cardboard box.

⇒ Store the receiver and all accessories in a dry and dust-free room.

⇒ Protect the receiver from frost.

Cleaning



Caution!

The receiver should not become wet. Never clean it with a wet cloth.

Do not use any cleaning agent containing solvents like petrol or thinners for cleaning. These agents may damage the surface of the casing.

⇒ Clean the casing of the receiver with a dry cloth.

Troubleshooting

Symptom	Possible cause and remedy
The numerical display of the receiver is not illuminated and there is no sound or image	The power cable is not connected. Connect the power pack to the mains socket. Connect the main switch.
Frontal display dark	The receiver is in the standby mode. Press the "Power" key on the remote control. The receiver switches on and the program is displayed on the TV monitor.
No sound or image, but receiver menus are displayed	The antenna is not directed towards the satellite. Adjust the antenna properly. No or only weak signal. Check the cable connection from LNB to the receiver and from the receiver to the connected equipment. Adjust the antenna.
The numerical display of the receiver is illuminated, but no image on the TV set.	The system is not connected properly. Check connection of the SCART cable The TV set is not in the AV mode. Switch the TV set to the respective AV input.
Poor image, blocking error, formation of small blocks	The antenna is not directed exactly towards the satellite. Adjust the antenna more precisely. For this purpose, use the "Info" key on the remote control. The signal strength will be displayed for directing the antenna properly. LNB is defective. Replace LNB.
No image, no sound, signal strength OK, no signal quality	The satellite antenna has been directed to a wrong satellite.
Bad reception of: Sat1, Pro7, Vox, N24, DSF, etc.	Wireless telephone is disturbing (DECT standard). Put the telephone to another place, use a better satellite cable.

The remote control does not work	Batteries are exhausted. Replace the batteries with new ones.
	Remote control is not directed properly. Aim the remote control towards the front side of the receiver and ensure that there is no obstacle between the remoter control and the receiver.

If a malfunction is not rectified in spite of this, please contact your specialized dealer or the manufacturer.

Disposal

Never throw the digital satellite receiver or the batteries in normal household waste. Ask your municipal authorities or local government about different methods for disposing of the equipment in an eco-friendly and proper manner. Hand over used batteries to a collection centre.

Technical Specifications

Receiver	
Dimensions in mm (W × D × H)	280 × 170 × 45
Input frequency range	950 MHz ~ 2150 MHz
IF band width	55 MHz / 8 MHz (below 5MS/s)
LNB power supply	13/18 GS, 0,35 A max. Overload protection
LNB control	22 KHz ± 2 KHz, 0.6 V pp ± 0.2 V
DiSEqC control	Version 1.0, Version 1.2, Tone-Burst A/B
Symbol rate	1 ~ 35 MS/s
Bit stream	MPEG-2 ISO/IEC 115200 bit stream specification
Input speed	Max. 15 Mbit/s
Error correction (FEC)	1/2, 2/3, 3/4, 5/6, 7/8, auto
Video	MPEG-2 MP@ML
Audio	MPEG -1/2 audio layer 1 or layer 2
Height-width ratio	4:3 Letterbox, 4:3 PanScan, 16:9
Video resolution	720 x 576 (Pal), 720 x 480 (NTSC)
Audio mode	Left, right, stereo
Multi-picture	6 x
Connecting cable	
LNB IF input	Type F, IEC 169-24
TV SCART	Video CVBS, RGB, YUV, Audio L, R
VCR SCART	Video CVBS, Audio L, R, RCA
RCA	Audio L,R
SPDIF, COAXIAL, OPTICAL	Digital audio output
S-VHS	S-Video output

Power supply	
Input voltage power pack	100-240 V ~, 50/60 Hz
Power consumption	13 W (operation) 3 W (standby)
Weight	Approx. 1.10 kp
Operating temperature	0 °C ~ +40 °C
Storage temperature	-40 °C ~ +65 °C

Manufacturer

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Guarantee

The guarantee for the digital satellite receiver SL 65 of Comag is in conformity with the prevailing statutory regulations at the time of purchasing the product.

Declaration of Conformity

The manufacturer hereby declares conformity with the following guidelines and standards for this product:

Guideline for low voltage, 73/23/EEC

- EN 60 335-1, EN 60 335-2-15

Guideline for electromagnetic compatibility, 89/336/EEC

- EN 55 013
- EN 55,020
- EN 61,938

Equipment type /model: Digital Satellite Receiver SL 65

Glossary

AC	Alternating Current Connection for alternating current
DC	Direct Current Connection for direct current
Cinch connector	Coaxial connector for connecting TV set or stereo system.
DiSEqC	Digital Satellite Equipment Control Digital system, with which the receiver can control different components of the external unit. It is especially used for selecting from multiple satellite positions (for example Astra and Eutelsat).
DVB	Digital Video Broadcasting Transmission of digital television programs.
EPG	Electronic Program Guide Visual display guide, which helps the user with detailed information while selecting programs.
IF connector	Coaxial connector for LNB antenna cable.
FTA	Free-to-air services Free-of-charge services that can be received without special decoder.
LNB	Low Noise Block Amplifier / Converter A device at the centre of the antenna, which converts high-frequency incoming signals from satellites into a low-frequency range and amplifies them simultaneously.
MPEG-2	International standard for transmitting video signals.
Mute	Key on the remote control for turning off sound
OSD	On-screen display Menu control displayed on the screen.
PID	Identification number of a received data stream. The PIDs ensure that a sender data is received completely.

Receiver	Receiver unit, which converts signals from the antenna to video and audio signals.
SCART	A 21-pole connector for connecting the TV set to the receiver.
Swap function	Invokes the last-set channel
Transponder	Transmission channel of a satellite
VCR	Abbreviation for Video Cassette Recorder.
YUV	YUV is a signal formed by one brightness (Y) and two color difference signals (UV). This signal is transmitted over three individual cables.